TABLE 2

Frequency (MHz)

Matter.	50	100	200	300	400	500	600	700	800	900	1000
S.C. 2um	30	26	24	20	20	10	20	15	18	15	18
S.C. 3um	30	28	24	20	22	12	20	18	17	16	19
R.C. 1x 1-2	30	27	23	19	18	8	14	12	14	14	17
R.C. 1x 4um	36	36	40	36	22	25	30	26	30	37	30
R.C. 2x 3um	33	33	35	30	25	27	32	25	31	30	30
R.C. 1x 4um	35	34	36	38	32	30	32	26	32	30	31

All values are in dB

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In the Claims

1. (Amended) A method comprising:

processing a polymer selected from the group consisting of a precursor to an electrically conductive polymer and ~~a~~ an electrically conductive polymer in a solvent comprising a fluorinate solvent said polymer in said solvent characterized by a dependence of the electrical conductivity of said electrical conductive polymer on the concentration of said polymer in said solvent, said concentration being selected to substantially maximize said electrical conductivity.

6. (Amended) A method of forming a polymer selected from group consisting of a precursor to an electrically conductive polymer and an electrically conductive polymer comprising: exposing a solution of polymerizable units to a solvent comprising a fluorinated solvent during polymerization to form said polymer in said solvent characterized by a dependence of the electrical conductivity of said electrical conductive polymer on the concentration of said polymer in said solvent, said concentration being selected to substantially maximize said electrical conductivity.

7. (Amended) A method comprising:

polymerizing monomers in the presence of a solvent comprising a fluorinated solvent to form an electrically conductive polymer; during neutralization of said electrically conductive polymer to an undoped form to form a deaggregated nondoped form of said electrically conductive polymer said polymer in said solvent characterized by a dependence of the electrical conductivity of said electrical conductive polymer on the concentration of said polymer in said solvent, said concentration being selected to substantially maximize said electrical conductivity.

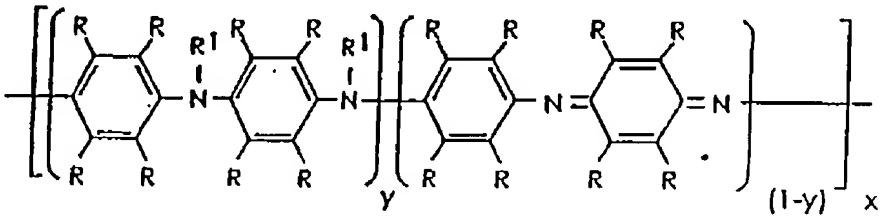
12. (Amended) A method according to claim 1 wherein said fluorinated solvent is selected from the group consisting of:

Hexafluoroisopropanol, Tetrafluoropropanol, Pentafluoropropanol, Hexafluorophenylpropanol, Perflurobutyl alcohol, Octafluoropentanol, Hexafluoro-2-propanol, Pentafluoro-1-Propanol, Tetrafluorophenol, Triflurophenol, Diflurophenol, Tetrafluoro-1-Propanol, 4-(Trifluoromethyl)benzyl alcohol, 2,2,2- Trifluoroethanol, 2,4,5 Trifluorophenol, 2,4 Difluorobenzyl alcohol, 2,4 Difluorophenol, 4-Fluorobenzyl alcohol, 2,2,3,3,3-pentafluoro-1-propanol, 2 -(perfluorobutyl)ethanol, 2-(perfluorohexyl)ethanol, 2-(perfluorooctyl)ethanol, 2-(perfluorodecyl)ethanol, 2-(perfluoro-3-methylbutyl)ethanol, 1H,1H,3H-tetrafluoro-1-propanol, 1H,1H,5H-octafluoro-1-pentanol, 1H,1H,7H-dodecafluoro-1-heptanol, 1H,1H,9H-hexadecafluoro-1-nonanol, 2H-hexafluoro-2-propanol of 1H,1H,3H-hexafluoro-2-butanol; trifluoroacetic acid, perfluoropropanoic acid, perfluorobutanoic acid, perfluoropentanoic acid, perfluorohexanoic acid, perfluoroheptanoic acid, perfluorooctanoic acid, perfluorononanoic acid, perfluorodecanoic acid, 3H-tetrafluoropropanoic acid, 5H-octafluoropentanoic acid, 7H-dodecafluoropentanoic acid of 9H-hexadecafluorononanoic acid, an amide of such a fluorine-containing carboxylic acid, trifluoromethanesulfonic acid of heptadecafluorooctanesulfonic acid; perfluorobenzene, hexafluorometaxylene ~~and such~~ polyfluoroaromatic compounds, perfluorotributylamine, perfluorotripropylamine ~~and such~~ polyfluorotrialkylamin compounds, perfluorohexane, perfluorooctane, (perfluoro-n-octyl) ethane, perfluoro-(2,3,5-trimethylhexane), ~~and other such~~

polyfluoroalkane compounds, (perfluoro-n-octyl) ethylene ~~and such~~ polyfluoroolefin compounds, perfluorocyclohexane, perfluorodecalin, ~~and such~~ polyfluorocycloalkane compounds perfluoro-(2-butyltetrahydrofuran) ~~and such~~ polyfluorocyclic ether compounds; trichlorotrifluoroethane ~~and such~~ chlorofluorocarbons, 1,3-dichloro-1,1,2,2,3-pentafluoropropane, 1,1-dichloro-2,2,3,3,3-pentafluoropropane, chlorofluorohydrocarbons, 1,1,2-trichloro-1,2,2-trifluoroethane, perfluoro (2-butylhydrofuran) ~~and~~ perfluorohexane, perfluoro(2-butyl tetrahydrofuran) ~~(Fluorinert FC-75, a product by Minnesota Mining and Manufacturing Co.)~~, 1,1,2-trichloro-1,2,2-trifluoroethane (F-113), perfluoro(2-butyltetrahydrofuran), perfluorohexane, 1,1,2-trichloro-1,2,2-trifluoroethane, perfluoro (2-butyltetrahydrofuran) ~~and~~ perfluorohexane, 1,1,2-trichloro-1,2,2-trifluoroethane ~~Florinato FC-40, FC-75~~, hexafluorobenzene, benzorifluoride, bisrifluoromethylbenzene pentafluorobenzene, 1,3-bis(trifluoromethyl)benzene ~~or~~ 1,4-bis(trifluoromethyl)benzene; perfluorodecalin, perfluorocyclohexane, perfluoro(1,3,5-trimethylcyclohexane); fluorine-containing alkylamine perfluorotributylamine, perfluorotripropylamine; a fluorine-containing cyclic ether ~~such as~~ perfluoro(2-butyltetrahydrofuran), a fluorine-containing polyether; a bis(heptafluoroisopropyl)ketone; perfluorohexane, methyltrifluoro acetate, ethyltrifluoro acetate, butylpentafluoro propionate; trichlorotrifluoroethane, monofluorotrichloromethane, fluorine-substituted ketones, ~~fluorine~~ fluorine-substituted esters, fluorine-substituted amides, fluorine-substituted ethers, fluorine-substituted aromatic hydrocarbon and fluorine-substituted aliphatic hydrocarbon, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,1,2,2-tetrachloro-1,1-difluoroethane, (trifluoromethyl)benzene ~~and~~ 1,3-bis(trifluoromethyl)benzene 1,1,2-trifluorotrichloroethane, 1,2-difluorotetrachloroethane, hexafluorometaxylene, 1,1,2,3,4-hexafluorotetrachlorobutane, octafluorodichlorobutane, 1,1,2-trifluoro-1,2,2-trichloroethane, 1,2-difluoro-1,1,2,2-tetrafluoroethane, fluorohalogenides; perfluoro alkanes; perfluoro alkenes; cyclic fluoride compounds; perfluorohydrides; perfluorocarboxylic acids; perfluoroketones; perfluoroaldehydes; perfluoroalcohols; perfluoroethers; amine fluorides; perfluorothiols; perfluorosulfonic acids; ~~and organic phosphorus compound arsenic compound fluorine derivatives~~, vinyl fluoride; vinylidene fluoride; trifluoroethylene; chlorotrifluoroethylene (CTFE); 1,2-difluoroethylene; tetrafluoroethylene (TFE); hexafluoropropylene (HFP), perfluoro(methyl vinyl) ether (PMVE), perfluoro(ethyl vinyl)

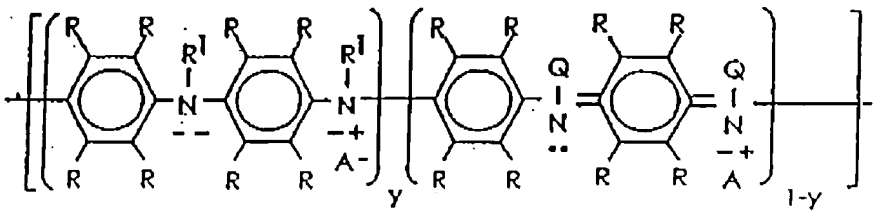
ether, perfluoro(propyl vinyl) ether (PPVE); perfluoro (1,3-dioxole); perfluoro(2,2-dimethyl-1,3-dioxole) (PDD) ~~fluorinated solvent is selected from the group consisting of~~ perfluorotoluene, perfluorocyclohexane, perfluorodimethylcyclohexane, perfluoro-methylcyclohexane, perfluoroxylene, perfluorobenzene, perfluorodecalin, perfluorodecane, perfluorohexane, perfluoroctane, perfluorodecane, trifluorotoluene, pentafluorotoluene, dichlorodifluoromethane, 1,1-dichlorotetrafluoroethane, 1,2-dichlorotetrafluoroethane, 1-chloro-1,1-fluoroethane, 1-chloroheptafluoropropane, 1,1,1,2,2-pentafluoropropane, perfluorobutane, 2,3-di-chlorooctafluorobutane, and 2,2,3,3-tetrafluorobutane. ~~Preferred solvents include butane, pentane~~, 1,1-dichloro-1-fluoroethane, and 1,2-dichlorotetrafluoroethane; perfluoroisooctane, perfluorotributylamine, perfluoroheptane, perfluorinated 2-butyltetrahydrofuran perfluorohexane, perfluorotributylamine, perfluorotriamylamine, fluorinated alkenes ~~such as~~ pentafluorostyrene, octafluorostryene, perfluoro-1,4-pentadiene, perfluoro-1,6-heptadiene, 3,5-bis(trifluoromethyl) styrenes, ~~etc.~~; fluorinated acrylates and methacrylates ~~such as~~ 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl acrylate, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl methacrylate, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-nonadecafluorodecyl methacrylate, 1,2,2,3,3,4,4,5,5,6,6-undecafluorocyclohexylmethyl acrylate, 1,2,2,3,3,4,4,5,5,6,6-undecafluorocyclohexylmethyl acrylate, 1,2,2,3,3,4,4,5,5,6,6-decafluoro-4-trifluoromethylcyclohexylmethyl acrylate, perfluorohexyl acrylate, perfluorobutyl acrylate, perfluorodecyl acrylate, 2,2,2-trifluoroethyl acrylate, 2,2,2-trifluoroethyl methacrylate, 1,1,1,3,3,3,-hexafluoro-2-propyl acrylate, ~~C8F17SO2N(n-C4H9)CH2CH2O2CCH=CH2, etc.~~; trifluorinated alkyl acrylonitriles, ~~e.g.~~, trifluoromethyl acrylonitrile; perfluoroalkyl vinyl ethers such as perfluorobutyl vinyl ether, pentafluoroethyl vinyl ether, and combinations thereof.

14. (Amended) A method according to claim 1 wherein said polymer is polyaniline having structural formula:



wherein each R can be H or any organic or inorganic radical; each R can be the same or different; wherein each [R sup 1] $\underline{R^1}$ can be H or any organic or inorganic radical, each [R sup 1] $\underline{R^1}$ can be the same or different; wherein $x \geq 1$; [preferably $x \geq 2$] has a value of from about 0 to about 1 [0.5 or said nonreduced or nonoxidized form y has a value from greater than 0.5 to 1 for said reduced form and y has a value from less that 0.5 to 0 said oxidized form].

15. (Amended) A method according to claim 1 wherein said polymer is a polyaniline having structural formula:



wherein each R can be H or any organic or inorganic radical; each R can be the same or different; wherein each [R sup 1] $\underline{R^1}$ can be H or any organic or inorganic radical, each [R sup 1] $\underline{R^1}$ can be the same or different; $x \geq 1$; Q^+ is a cation and A^- is anion; [preferably $x \geq 2$]; y has a value of from about 0 to about 1 [0.5 or said nonreduced or nonoxidized form; y has a value from greater that 0.5 to 1 for said reduced form and y has a value from less that 0.5 to 0 said oxidized form].

17. (Amended) A method according to claim 1 further including forming from said polymer an object selected from the group consisting of a film, a fiber, [or] and a structural part.

18. (Amended) A method according to claim 1 wherein an electrically conducting polymer is formed having a level of electrical conductivity thereof which is varied by varying the concentration of said polymer in [said] solution.

20. (Added) A method comprising:

providing a solution of emeraldine base and a 50/50 mixture of hexafluoroisopropanol / hexafluorophenylpropanol said emeraldine base being greater than 3% of said solution;

adding a ~~depont~~ dopant to said emeraldine base to a conductive from of said emeraldine base said depont is selected from the groups consisting of ~~camphorsulfonic~~ camphosulfonic acid and acrylamido propane ~~sulfonic~~ sulfuric acid,

said conductive form has a electrical conductivity of greater than about 200 s/cm.

21. (Added) The method of claim 12 further including non fluorinated solvents selected from the groups consisting of nonfluorinated alcohols, phenols, esters, ethers, ketones, amides, amines, alkanes, cyclic alkanes, alkenes, aromatics, ~~and so on such as~~ anisole, benzyl alcohol, cyclohexanone, ethyl lactate, ethyl acetate, diethyl ketone, diethyl malonate, m-cresol, phenol, N-methylpyrrolidinone, N-dimethylformamide, propylene glycol dimethyl ether acetate,